

Zener Diodes

1.0W 5.1 to 39V DO-214AC

SMAZ5V1~39

MERITEK

FEATURE

- Glass/Oxide passivated chip
- Low Leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- UL Flammability Classification Rating 94V-0



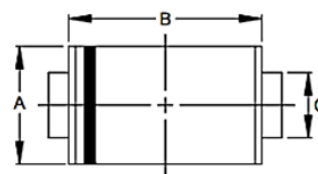
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
DC Power Dissipation at $T_L = 50^\circ\text{C}$	P_D	1.0	W
Maximum Forward Voltage at $I_F = 200\text{mA}$	V_F	1.2	V
Maximum thermal resistance junction to ambient air	$R_{\theta JA}$	170	K/W
Junction Temperature Range	T_J	-55 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ\text{C}$

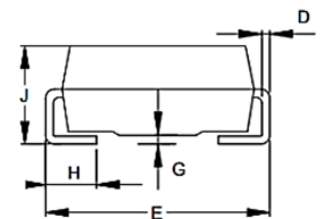
Note: 1. T_L =Lead temperature at 3/8"(9.5mm) from body,
 2. Ratings at 25 $^\circ\text{C}$ ambient temperature unless otherwise specified.
 3. Valid provided that leads are kept at ambient temperature at a distance of 10mm from case.

DIMENSIONS

Item	DO-214AC (SMA)	
	Min. (mm)	Max. (mm)
A	2.180	2.790
B	4.060	4.570
C	1.230	1.700
D	0.152	0.305
E	4.700	5.310
G	0.000	0.203
H	0.750	1.510
J	1.700	2.310



DO-214AC (SMA)



Zener Diodes

1.0W 5.1 to 39V DO-214AC

SMAZ5V1~39

MERITEK

SPECIFICATIONS

Part Number	Nominal Zener Voltage		Maximum Zener Impedance			Max Reverse Leakage Current		Max DC Zener Current
	$V_Z @ I_{ZT}$	I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$		I_{ZM}
	V	mA	Omh	Omh	mA	μA	V	mA
SMAZ5V1	5.1	100	5	500	1.0	2.5	1.0	196
SMAZ5V6	5.6	100	2	250	2.0	5.0	2.0	179
SMAZ6V2	6.2	100	2	200	2.0	5.0	3.0	161
SMAZ6V8	6.8	100	2	200	1.0	5.0	4.0	147
SMAZ7V5	7.5	100	2	450	1.0	5.0	5.0	133
SMAZ8V2	8.2	100	2	200	1.0	5.0	6.0	122
SMAZ9V1	9.1	50	4	200	1.0	5.0	7.0	110
SMAZ10	10	50	4	200	1.0	1.0	7.6	100
SMAZ12	12	50	7	150	1.0	1.0	9.1	83
SMAZ15	15	50	10	150	1.0	1.0	11.4	67
SMAZ16	16	25	15	150	1.0	0.5	12.2	63
SMAZ18	18	25	15	150	1.0	0.5	13.7	56
SMAZ20	20	25	15	180	1.0	0.5	15.2	50
SMAZ22	22	25	15	180	1.0	0.5	16.7	45
SMAZ24	24	25	15	180	1.0	0.5	18.2	42
SMAZ27	27	25	15	200	1.0	0.5	20.5	37
SMAZ30	30	25	15	250	1.0	0.5	22.8	33
SMAZ33	33	25	15	300	1.0	0.5	25.1	30
SMAZ36	36	10	40	350	1.0	0.5	27.4	28
SMAZ39	39	10	40	450	1.0	0.5	29.6	26

Note: 1. Standard tolerance on the nominal zener voltage: $\pm 5\%$

2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method

Zener Diodes

1.0W 5.1 to 39V DO-214AC

SMAZ5V1~39

MERITEK

RATING AND CHARACTERISTIC CURVES

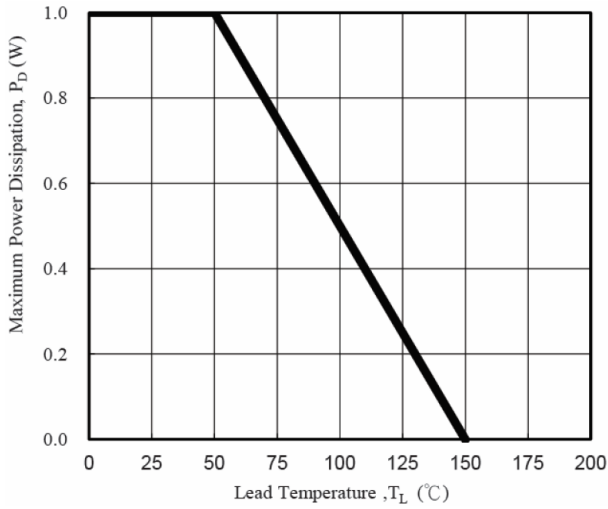


Fig1. Power Temperature Derating Curve

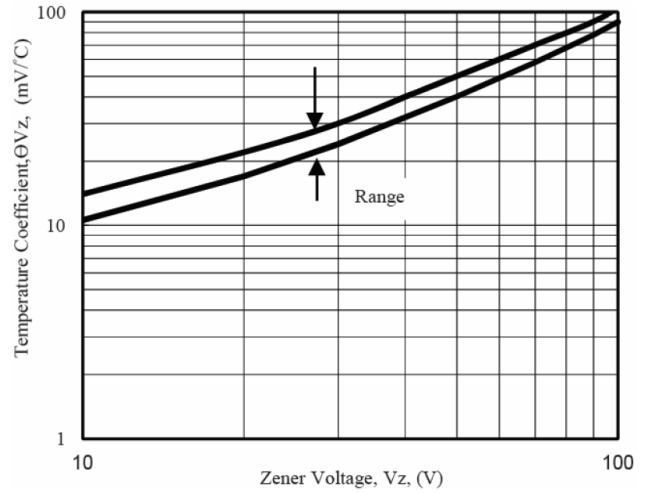


Fig2. Temperature Coefficients v.s. Zener Voltage

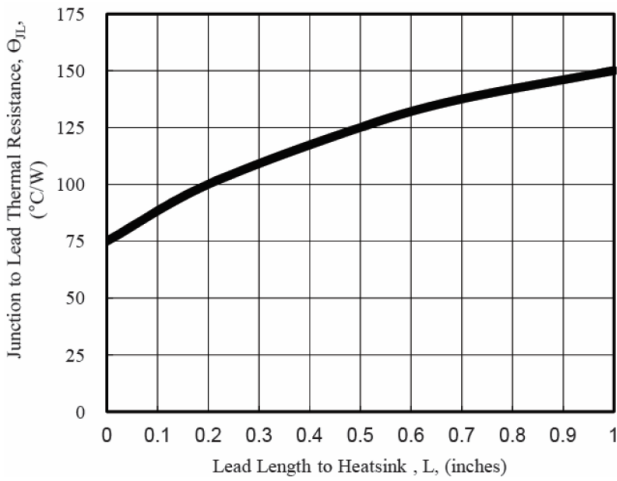


Fig3. Typical Thermal Resistance v.s. Lead Length

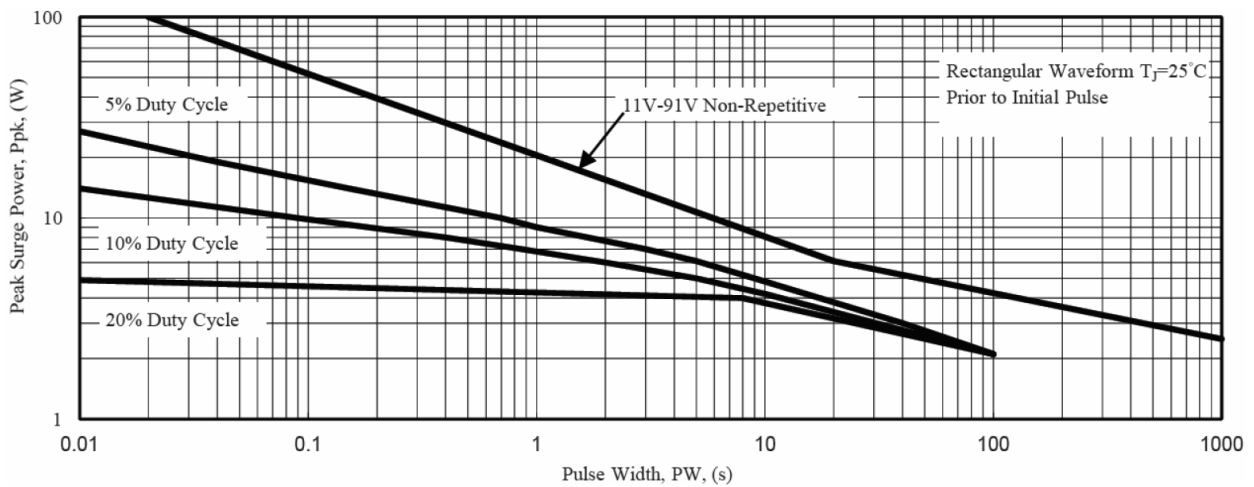


Fig4. Maximum Surge Power

*Specifications subject to change without notice